

WHAT IS CLAIMED IS:

1. An information recording medium comprising a plurality of layers to be irradiated with light for information recording/reproduction,

5 said plurality of layers each having asperities made of continuous or discontinuous grooves,

the information recording medium including at least two types of layers on which said asperities have different shapes or said grooves constituting said asperities make
10 different changes in their longitudinal directions.

2. The information recording medium according to claim 1, wherein said layers are layers for multi-valued recording.

3. The information recording medium according to
15 claim 1, including at least two layers having said asperities of different depths and/or widths.

4. The information recording medium according to claim 3, wherein a layer or layers farther from a light incident side is/are greater than a layer or layers closer
20 to the light incident side in the depth and/or width of said asperities.

5. The information recording medium according to claim 1, said asperities being meandered or deformed at predetermined modulations in the longitudinal directions of
25 said grooves, the information recording medium including at

least two types of layers differing from each other in the modulation of the meandering or deformation.

6. The information recording medium according to claim 5, wherein a layer or layers farther from a light incident side is/are greater than a layer or layers closer to the light incident side in the modulation of the meandering or deformation.

7. The information recording medium according to claim 1, said asperities being meandered or deformed at predetermined modulations in the longitudinal directions of said grooves, the information recording medium including at least two types of layers differing from each other in the period of the meandering or deformation.

8. The information recording medium according to claim 7, wherein a layer or layers farther from a light incident side is/are smaller than a layer or layers closer to the light incident side in the period of the meandering or deformation.

9. An information recording medium having a plurality of layers to be irradiated with light for information recording/reproduction,

said plurality of layers being divided into respective predetermined numbers of sectors,

the information recording medium including at least two types of layers having different numbers of said

sectors.

10. An information recording medium having a plurality of layers to be irradiated with light for information recording/reproduction,

5 said plurality of layers being divided into respective predetermined numbers of sectors,

the information recording medium including at least two types of layers having said sectors of different lengths.

10 11. The information recording medium according to claim 10, wherein a layer or layers farther from a light incident side is/are smaller than a layer or layers closer to the light incident side in the length of said sectors.

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15 12. The information recording medium according to claim 10, wherein a layer or layers farther from a light incident side is/are greater than a layer or layers closer to the light incident side in the number of said sectors.

20 13. An information recording medium having a plurality of layers to be irradiated with light for information recording/reproduction,

said plurality of layers being divided into respective predetermined numbers of sectors,

said sectors each having at least a pit area and a data area,

25 the information recording medium including at least

two types of layers having different ratios between the modulations of reproduced signals at said pit area and said data area.

14. The information recording medium according to claim 13, wherein a layer or layers farther from a light incident side is/are greater than a layer or layers closer to the light incident side in the ratio between the modulations of reproduced signals at said pit area and said data area.

10 15. An information recording medium comprising a first layer for generating a tracking error signal of a first modulation and a second layer for generating a tracking error signal of a second modulation when irradiated with light in operation, said second modulation
15 being different from said first modulation.

16. An information recording medium comprising a first layer for generating a data area reproduced signal of a first modulation and a second layer for generating a data area reproduced signal of a second modulation when
20 irradiated with light in operation, said second modulation being different from said first modulation.

17. An information recording medium comprising a first layer for generating a wobble signal of a first modulation and a second layer for generating a wobble
25 signal of a second modulation when irradiated with light in

operation, said second modulation being different from said first modulation.

18. An information recording medium comprising a first layer for generating a pit area reproduced signal of a first frequency and a second layer for generating a pit area reproduced signal of a second frequency when irradiated with light in operation, said second frequency being different from said first frequency.

19. An information recording medium comprising a first layer for generating a wobble signal of a first frequency and a second layer for generating a wobble signal of a second frequency when irradiated with light in operation, said second frequency being different from said first frequency.

20. An information recording medium comprising a first layer for generating a first sum level of signals and a second layer for generating a second sum level of signals when irradiated with light in operation, said second sum level being different from said first sum level.

21. An information recording medium comprising a first layer for generating a sector detection signal at first time intervals and a second layer for generating a sector detection signal at second time intervals when irradiated with light in operation, said second time intervals being different from said first time intervals.

22. An information recording medium comprising a first layer for generating a first number of sector number detection signals and a second layer for generating a second number of sector number detection signals within a predetermined time when irradiated with light in operation, said second number being different from said first number.

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